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ABSTRACT

This report focuses on a description of the overhead projector and suggests ways in which its application in the foreign language classroom can be most effective. Following a brief review of the function of the projector, the author discusses: (1) advantages and limitations of the teaching device, (2) factors to consider in selecting a machine, (3) techniques used in the construction of transparencies, and (4) suggested techniques in presentation. A short, selected bibliography concludes the report. (RL)

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Number 19

The Overhead Projector

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THE OVERHEAD PROJECTOR

Professor Wrenn's paper was first published in Sight and Sound: The Sensible and Sensitive Use of Audio-Visual Aids, the 1969 Reports of the Working Committees of the Northeast Conference on the Teaching of Foreign Languages. The demonstration of the use of the overhead projector that illustrated the report was filmed as part of the film "Sight and Sound: Media in Foreign Language Teaching." Both the Reports and the film are available through the MLA Materials Center, 62 Fifth Avenue, New York 10011. Professor Wrenn's paper is here reprinted, with permission, as an ERIC Focus Report.

Donald D. Walsh

The overhead projector, which is a device for showing images that have been written on a transparent material, has increased in popularity as a teaching tool with the development of technologies that have simplified the preparation of permanent transparencies and that have produced inexpensive versatile lens systems. Older models have been available for twenty to thirty years. Nevertheless, the initial expense of the projector and the necessary basic equipment has limited the use of this teaching tool to teachers in the best-supplied schools. In recent years, however, the availability of commercially prepared transparencies has justified the initial expense of a projector even for smaller schools. Despite the increased number of overhead projectors in the schools, many language teachers are not familiar with this teaching tool.

The decision to use a particular audio-visual technique usually is made after carefully considering several factors. It rarely is based only on the capabilities of the equipment that may be used even if that equipment is conveniently available. The following factors influence the decision:

1. The teacher sometimes has the perception that he has identified the problem to be solved and that he has the professional abilities to solve it.
2. The teacher has to be familiar with the techniques required. Few language teachers can use competently all audio-visual techniques, and few audio-visual specialists are language teachers. Since most people use the techniques that they already know, such considerations as the availability of a piece of equipment, "familiar" knowledge of the techniques required for using it, and the friendly advice of knowledgeable colleagues influence the decision.
3. The teacher has to have the money and time to develop materials, to try new methods, and to make instructive mistakes.
4. The teacher has to recognize that there are significant differences among the various types of equipment: some are more suitable for specific teaching tasks than others. The teacher can ascertain the suitability of a piece of equipment only when he is developing a solution to a particular problem.

Let us consider one example that shows how the teacher decided on a particular technique to solve the familiar problem of teaching the dialogue in the classroom.[1] The pedagogical purpose of the basic dialogue is to teach a sample of the language with its appropriate speech rhythms. We must remember that language is paramount in the learning of the dialogue. If we forget this fact, certain errors frequently occur,

especially if the student is directed to memorize the dialogue without sufficient practice. For example, if the student is deprived of authoritative associated intonation patterns that are part of the dialogue, he will recite the dialogue in a stumbling, halting way with inappropriate sentence rhythms. Another common error occurs when the student is rewarded for presenting the simple sequence of events in their proper order, for in this case the student is not learning language but irrelevant details.

As a solution to the problem of teaching the dialogue, we made many unsuccessful attempts to use pictures on the blackboard. Then we developed a technique using an overhead projector and some standard mnemonic devices[2] in combination with judicious "fading" (or "minus-one") techniques[3]. The basic transparency, which is made from copy prepared on a "primary" typewriter,[4] supplies only the first letter of every "word" in every sequence of events. None of the intonation patterns that give the sequence meaning are presented; these have to be, and are, supplied by the teacher. Enough mnemonic clues are provided so that the students do not try to "peek" at the text, and bad habits can be unlearned quickly. This technique also helps the students memorize the dialogue much more rapidly.

After several attempts, we "faded" the speech of the speaker who had the shortest role, and asked the students to supply the speaker's words. We did the same with the speech of the longest speaker. The original transparency was used in each case for this "fading," by masking the speeches, in turn, with opaque masking tape from the underside of the transparency. As a result the original dialogue was preserved for the teacher to see (a timesaving device), but it was masked from the students' view.

What other techniques could we have used to solve the problem of teaching the basic dialogue? We had machines available for photocopying and little money to spend. We knew our limitations, and we chose the overhead projector. But let us consider the other alternatives.

We could choose chalk and a chalkboard, which we had used for the same presentation in the beginning. This method required time to present neatly, and when a speech was "faded" (by erasure), it was faded for the teacher, too. Finally, every time a review was necessary, the presentation had to be repeated from the beginning.

We could choose some pictures, projected or nonprojected, that adequately defined the situation so that the students did not think that they were simply being asked to remember the sequence of events in the dialogue. In practice, it was difficult to develop a set of non-mnemonic devices with pictures that would present the sequence of events clearly to the student so that he could concentrate on learning language.

We could choose slides, filmstrips, or the opaque projector, but these three techniques have the same disadvantage: the teacher cannot easily observe the class. During the early stages of practice with a new dialogue, the teacher needs "feedback" from watching as well as hearing the students so that he may gauge an appropriate level of practice. The filmstrip also has certain other disadvantages. The teacher does not have a sense of immediacy using the filmstrip because he has to prepare a presentation for a class meeting in two hours, evaluate it, and then improve it for the next day's class. You have to be extremely confident to pay for twenty-four hour service in film processing. With the filmstrip, some of the rapid back-and-forth interchange in the classroom would be lost in dial-twisting. In contrast, even an inexperienced teacher has control over a presentation on a transparency, and he soon can successfully use this medium.

There always will be many choices and a variety of competing media. Any given

choice will be based upon the familiar, the tactically appropriate, and the economically feasible. In order to make more meaningful judgments, we must develop our skills with a variety of techniques so that we can distinguish more accurately which technique will be most effective for each language-teaching problem we are expected to solve.

Description of the Overhead Projector

Overhead projectors differ in the following ways:

1. types of lenses;
2. power of the lamp required to project an image through the lens system in rooms of different sizes;
3. the size of the blower needed to dissipate the heat of the lamp.

These criteria govern the overall size and weight of the projector. Two types of projectors – auditorium and classroom – that are broadly differentiated according to function have been selected for the "needs of the market." Auditorium projectors as a type are heavyweight semipermanent projectors with a long focal length. Classroom projectors are light-weight portable projectors that come in two popular focal lengths: 12.5 inches and 14 inches. The diagram on page 4 is of a classroom projector.

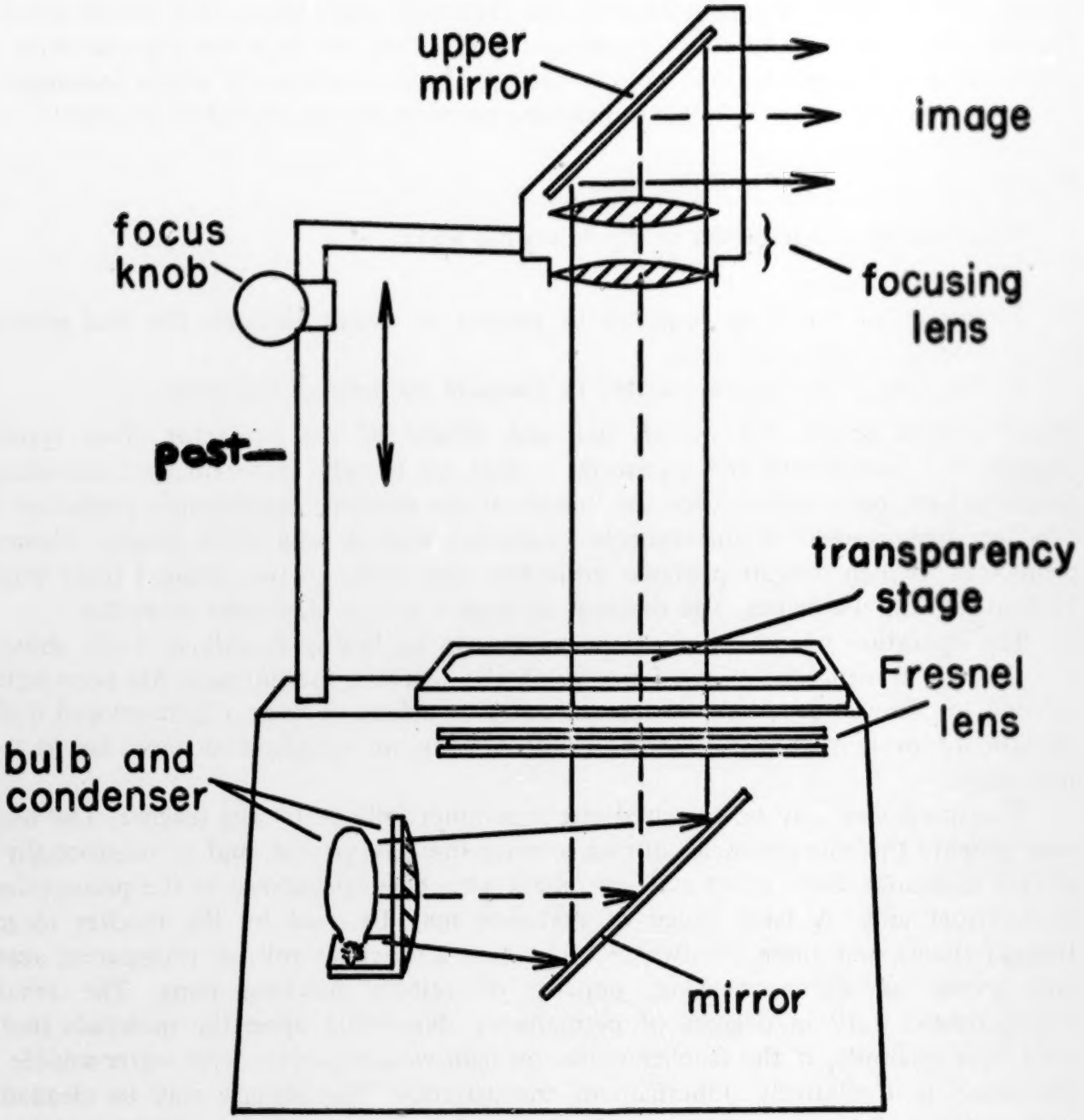
The operation of the overhead projector can be briefly described. Light shines up through the transparent material on which the teaching presentation has been written, printed, or drawn. This light is focused onto a surface, such as a light-colored wall, or chalkboard or a matte-finish screen. The latter is an excellent surface, but it is not necessary.

Transparencies may be prepared either commercially or by the teacher. The teacher may prepare the transparencies during or after the class period, and he occasionally can obtain assistance from other staff members who have specialized in the preparation of audio-visual aids. A large range of materials may be used by the teacher to make transparencies, but there are two requirements: a sheet (or roll) of transparent acetate, and grease, or china marking, pencils, or felt-tip marking pens. The resulting transparencies vary in degrees of permanency depending upon the materials that are used. For example, if the teacher writes on light-weight acetate with water-soluble ink, the result is a relatively impermanent transparency. The acetate may be cleaned off with a damp cloth and used again. If the teacher writes on heavy-weight acetate with permanent ink and coats it with a plastic spray, the result is a durable transparency that can be reused many times.

Advantages and Limitations of the Overhead Projector

The overhead projector has many advantages and few limitations. It has the following advantages:

1. It is simple to operate, focussing is relatively easy, and a single switch controls the source of light.
2. It requires little maintenance. The bulb in the projector lasts about 70 to 75 hours, and many newer models have a spare bulb in auxiliary position in case of bulb failure.
3. It may be used in a lighted room without drawing the shades or dimming the lights, which may be a particularly attractive feature when teachers are working with younger, or poorly motivated students.



4. It permits the teacher to face the class so that he can readily observe student reaction to his instruction.
5. Teachers can prepare their own materials for use with the overhead projector more easily than they can if they are preparing materials for slides, filmstrips, films, or nonprojected devices such as flash cards.
6. It may replace the chalkboard because in class the teacher simply draws or writes on a square or roll of acetate. A trivial point is that there is no chalk dust, to which some persons are allergic.
7. It is relatively less expensive as a single unit than a movie projector, rather its initial cost is comparable to the cost of a slide, or a filmstrip, projector. It competes for funds with devices (such as tape recorders) that are essential for language teaching, but when there are enough tape recorders available to meet minimum institutional needs, the overhead projector is <u>strongly</u> competitive with the purchase of an additional tape recorder.

In contrast, there are few limitations on the use of the overhead projector. The most severe limitations are posed by the topical system. Every person in the audience must be able to see everything on the screen. This requirement may be stated roughly as a rule-of-thumb: "The smallest image seen on the screen must have a height of one inch for every 30 feet of viewing distance."[5] This rules out material copied directly from ordinary printed books (except larger illustrations), and all typing except copy prepared on the "primary" typewriter, which is suitable for small classes.

More specifically, the following four variables can be controlled by the teacher, only letter size will be beyond the teacher's control in some situations:

1. The focal length of the projector;
2. the distance of the audience from the projected image (this is stated in the "2 X 6" rule: Two times the screen width should equal the distance from the screen to the first row of seats; six times the screen width should equal the distance from the screen to the last row of seats);
3. the size of the images on the original transparencies;
4. the location of the projector (for classroom projection the projector usually is located half-way between the front of the room and the front seats).

Selecting an Overhead Projector

Among the factors that may influence the selection of an overhead projector are the following:

Focal Length. The most popular focal lengths are 12.5 and 14 inches.

Light Intensity. Machines commonly come in four wattage sizes: 420, 600, 750, and 1000 watts. The 600 and the 750 are the most popular wattages; either one should be appropriate to most installations. However, if a teacher regularly uses a thick packet of separate transparent sheets as overlays, one laid on the other (see Techniques for Making Transparencies, p. 8, the higher-wattage lamps may be more effective because they permit the light to penetrate the extra layers of acetate and because they maintain the clarity of the projected image.

Portability. The weight of the various widely available commercial machines ranges from approximately 16 pounds to about 30 pounds. Other features relevant to portability are whether or not the post and head fold down and whether or not the machine has a convenient carrying case or a carrying handle.

Position of the Post. All projectors have standard size stages (10" X 10"), but some have the post that carries the optical head in an awkward position when framed transparencies are used.

Cost and Accessories. One accessory that you should order with your projector is an acetate-roll attachment, unless you have had considerable experience using overhead projectors and are certain that you do not need this feature in your classroom. The acetate roll can be used as a chalkboard as described on p. 3.

A teacher might consider adding the following accessories of more limited utility to his stock as he defines his teaching needs more clearly:

1. a slide adaptor that may help to integrate an already existing collection of slides for a specific teaching situation;
2. a "polarizing" attachment that gives the images on the transparency the appearance of motion.

The prices of the various projectors are approximately the same, given the same features. The cost of the basic classroom projector ranges from about $170 to $200; auditorium models are more expensive. Because the prices of the basic projector fall into a narrow range, the convenience features outweigh the price as a basis for choosing one projector over another. A teacher who plans to buy a projector should ask the audio-visual specialist in his school system for assistance. The audio-visual person should collect data and instruct the teacher in the use of the machine. The teacher should write to the various manufacturers for the specifications of their machines, then examine the several specifications and the manufacturers' claims, and decide which of the various machines is most appropriate to his uses. The local distributors for the machines should be invited to lend their machines for inspection and for trial. The teacher should practice using the machines with materials that he normally would use in a classroom and judge the convenience of the features of each of the machines.

Selecting and Using Materials

Because only a limited variety of commercially prepared materials, at present, are designed specifically for language teaching, the emphasis in this section will be placed on specifying the criteria that will help the teacher evaluate commercially prepared materials and that will aid the teacher in selecting elements for producing his own high-quality teaching materials.

An excellent source, in this context, is the Criteria for the Evaluation of Materials Prepared by the Modern Language Association, which is presented as an appendix to its Selective List of Materials. The Criteria,[6] as originally developed, did not include a category for the evaluation of transparencies for the overhead projector. However, since the overhead projector with its associated transparencies is a device for presenting material for language learners, it shares some of the features of other teaching aids and devices. In some ways it is similar to texts and must be judged by the same criteria; in other ways it is similar to filmstrips, to slides, and to maps, and must be subject to the criteria used in judging these media. In the Criteria, materials are judged either "acceptable" or "unacceptable" for each of a variety of aspects.

Pictures and wall charts are evaluated only if they accompany language programs, there are evaluations of filmstrips and slides only if they are accompanied by recordings made for the language class. It is clear that these other media that are similar to transparencies are evaluated only in terms of their integration into a total language program. Since the same criteria are to be applied by analogy to the evaluation of transparencies, it will be necessary at every stage of evaluation to have in mind, and sometimes to state quite specifically, what relation a particular transparency has to the larger language-learning situation. The audio component, whatever its immediate source, that will accompany some transparencies also will have to be described.

The transparency supplements other language-teaching material that is in a textbook, on tape, or often in a detailed outline in the teacher's mind. The transparency presents only a visual image; this image is supported by, or supports, some other language-learning activity, such as speaking, reading, writing, or some kind of listening. In each of these roles the transparency is in some way competitive with nonprojected visuals, such as maps, flash cards, or wall charts, and with other projected visuals, such as slides and filmstrips.

Several criteria apply specifically to transparencies; the most useful is judging its flexibility. This judgment is made by considering each component (tree, book, word, cow, or person) in a transparency, whether it is prepared by the teacher or produced commercially. The judgment is made in terms of the transparency's usefulness in achieving one or more of three aims:

1. Teaching a particular lesson or part of a lesson;
2. Teaching the content of subsequent lessons as well;
3. Providing a program of regular review.

Any element in a transparency that does not contribute to all three of these aims decreases its flexibility.

Simplicity is another criterion that is important in the selection and preparation of transparencies. Two different meanings of simplicity are relevant here: a transparency is simple to prepare and to use, and a transparency presents a particular concept, that is, it is an uncluttered transparency designed to teach only a single point. No element on the transparency should distract from the single point to be taught. For structure drills, therefore, simple figures, such as stick figures and silhouettes, may be more useful than elaborate cartoons; this usually applies to both young children and adults, while unsophisticated adolescents may feel "talked down to" by such "childish" presentations. Simple figures are useful precisely because they lack any distracting content that shows either culture or personality. On the other hand, stark simplicity may not be desirable in materials designed to illustrate cultural content. Language-teaching materials that emphasize cultural content are much more sensitive in context than those designed for the simpler and more limited purpose of language drills and exercises. For these latter purposes, as specificity in the material increases, a particular transparency most likely will be suitable only for a limited range of culturally appropriate situations, usually discussed by students at a higher level of language proficiency. In short, specificity in a transparency reduces flexibility. In many ways the criteria for utility that are to be applied to each component in a transparency are a restatement of the need for both simplicity and flexibility.

While flexibility and simplicity are both valid criteria, they often conflict, and they are not final aims. Transparencies must be developed with particular purposes in mind. A transparency designed to drill a series of contrasting sounds in the early stages of language acquisition, when familiarization with the sounds of the language is the goal, may group together many objects with similarities in pronunciation. But this same transparency may be inappropriate to use with a pattern drill when grammatical similarities must be emphasized. On the other hand, a complex picture that shows a variety of activities at the same time would overwhelm the student unless he has reached a level of competence in vocabulary and the range of grammatical structures that he needs to talk easily about all of these activities.

Many commercially prepared transparencies are particularly limited in terms of their potential flexibility, and many are so excessively specific that they are confusing. This may occur partly because the preparation of commercial transparencies often is considered an artistic, rather than a pedagogical, task. Many transparencies caricature the individuals in foreign cultures or the cultures themselves. Even when these caricatures avoid introducing or reinforcing cultural stereotypes, they usually are not representative of the culture and they sometimes are offensive to language teachers who belong to that culture. Some of the more limited highly specific transparencies

illustrate nine to twelve nouns, or verbs, on a single transparency. They are designed to be "vocabulary builders," but, without careful directions from the teacher, they easily can degenerate into devices for learning words from pictures in much the same way as if the words were printed in a textbook or written on a blackboard. Such a transparency lacks flexibility, since there is no easy way to separate the picture designed to represent any single noun or verb from other pictures on the transparency.

The teacher can avoid making similar errors by thoughtful planning both for specific teaching goals and for long-term utility. Application of the criteria of simplicity and flexibility as defined above will identify commercially prepared materials that lack classroom utility, however "slick" the artwork.

Techniques for Making Transparencies

The teacher may use four major techniques to produce his own transparencies. They include the following:

1. write directly on the acetate with a suitable instrument;
2. use a heat process;
3. use a photocopy process; or
4. use an ammonia (Diazo) process.

Writing Directly on Acetate. If the teacher does not need the transparency after it has been used, he may use the acetate like a chalkboard. For this, a sheet (or roll) of acetate and a writing instrument are required. A number of suitable writing instruments are available. They include grease pencil, such as a china-marking pencil, since a grease solvent can be used to erase the exercise, or felt- or nylon-tipped pens with water-soluble ink that can be wiped off easily with a damp cloth. The marking pencil, special crayon pencils designed for the overhead projector, and the water-soluble inks all come in a variety of colors.

For permanent materials, the teacher can use nylon- and felt-tipped pens, which come in a variety of permanent colors. Some of these can be erased by using special solvents. However, since these inks are on the surface of the acetate, they become abraded with use and should be protected w[illegible] a plastic spray to make them permanent.

Heat Processes. All of the heat processes for preparing transparencies require an original, which is the teaching material prepared for the 10" x 10" projector stage, that is to be reproduced on the transparency, a sheet of heat-sensitive projection film, and an office copying machine.

Two common heating devices are the office copying machines sold under the trade names "Thermofax" and "Xerox," which have slightly different requirements. The thermographic process reproduces only originals that have been prepared in carbon ink. The carbon can be from a soft pencil, a carbon typewriter ribbon, or from some carbon-based felt and nylon marking-pen inks. Any material written on the original in colored ink will not reproduce. The xerographic process will reproduce an original that is written in any color or any variety of colors, but it reproduces any color as some intensity of carbon black. Outline drawings and clear, distinct lines reproduce very well on this machine. But originals prepared for reproduction by this process should not have large areas of black, since these do not reproduce well by xerography.

Acetate for Use with Heat Processes. New plastics for use with these heat processes are increasingly foolproof. A commonly used plastic is the Direct Reading Positive

(marketed as "3M type 127"), which gives a black image and a clear background. A different variety, the Extra Quality Positive (marketed as "3M type 125") gives a silver frosted image. Another variety of films produces a clear image on a solid color background. P[illegible]tic films for xerography are also available, which produce comparable results.

In both xerographic and thermographic processes, reproduction onto acetate is relatively simple, even though bonding ink to acetate requires a higher temperature than bonding ink to paper. Settings will vary slightly from machine to machine. It is worthwhile to ask the local sales representative to help you find the setting that is appropriate for your copying needs so that you can use the same setting whenever you make transparencies.

If the original that is to be reproduced is not of uniform blackness, there will be uneven reproduction with both photocopying processes. The most efficient way to solve this problem is to make a xerographic copy of your originals, as xerography will leave a coat of carbon material of even density on the copy. This "second-generation" original can be used for reproduction with either thermographic or xerographic copiers. It also may be used to protect originals against loss.

Another heat process is the "heat-lift film" that lifts colored pictures from clay-filled papers. This technique is useful for reproducing colored pictures from the so-called "slick magazines." In this process, the original picture is destroyed because the image is removed from the original picture and transferred to the acetate. This technique is not often used in language teaching because the magazine pictures are seldom simple and flexible enough for language drills. They may, however, be useful for introducing cultural content into the language class. This heat transfer process may be effected with a warm iron at home or by thermography or xerography.

Photocopy Processes. Photocopy techniques are divided into wet processes, dry processes, and the diazo process. All these processes are similar since they use first a two-stage process of exposure to a sensitized (negative) paper and then a development onto a positive transparent film. Equipment for both processes is usually designed so that the separate units for exposure and development are packaged in one kit.

1. Wet Processes. A variety of equipment is produced by different manufacturers; some machines reproduce leaves from books, while others take only single sheets. The technique for reproduction is similar for all varieties of equipment, and it is usually described in the manufacturer's instruction booklets that accompany the machines. This process is affected by the following:

a. exposure time;
b. the age and temperature of the developing solution (as well as the number of times a particular batch of solution has been used); and
c. the time lag before the negative is peeled from the positive.

In general, these operations cannot be timed accurately only from the manufacturer's directions; it is better to establish the best exposure time for a given machine and solution by trial and error. The teacher who buys the equipment should be aware that the "age and vitality of solution" variable probably will not be apparent in a demonstration situation, where the solution is fresh. This process is limited to black and white, but it may be adapted to the transfer of solid black areas by the use of a coarse half-tone ("document") screen.

2. Dry Processes. Dry-process equipment develops color as black and white and

makes half-tones with somewhat less difficulty than the wet process. It requires a light source, positive and negative sheets, a glass cover for the document to be reproduced, and a developing element. The light source and the developer are usually sold as a compact kit. With this equipment, too, good timing through the stages of exposure and development is crucial to success.

3. The Diazo (Ammonia) Process. The Diazo (ammonia) process requires a source of ultraviolet light, tracing paper, a timing device, Diazo film (available in a variety of colors), ammonia, and an ammonia container for development of the transparency. These various elements are available separately or in portable kits. The material to be reproduced is prepared on tracing paper, placed under Diazo film, and exposed to ultraviolet light for a carefully timed period. Then the film is transferred to a container of ammonia vapor for development. The Diazo process, like the photocopy processes, requires judicious timing at the exposure and development stages. Skill is usually achieved by trial and error. Diazo films are light weight and require mounting in a cardboard frame to provide rigidity.

Techniques for Presentation

After the teacher has decided what he wants to teach in any given class period or in sequence of class periods, and after he has prepared a set of transparencies that will help him to teach those things, he must select and arrange all of the transparencies that he will use in a particular class session. At this point he must study the actual presentation – what does he expect the class to do during the hour, and how does he want to apportion time so that the students learn most efficiently.

On the simplest level, the teacher wants his students:

1. to look at the materials which he is presenting (he turns the light on);
2. to look at him and what he is doing (he turns off the projector and makes his point);
3. to look at the data and listen to him (he leaves, or turns, the projector on and makes his point).

Any other combination, such as leaving the light on while talking about a point not on the transparency, is distracting and irrelevant.

On another level of technique, that is, the actual presentation of the material, we again have very few choices: essentially, to present the material gradually or all at once. In a gradual presentation the material is presented in the order that the teacher considers to be most appropriate for the student; the teacher can give the separate points their proper weight and judge from class reaction whether a particular point needs to be further expanded or explained in class. It also helps to prevent the careless student from becoming distracted by a minor point in a more complex presentation, or from developing a sudden, very simple, impression of the point of a lecture. In gradual presentation of material, the teacher must make a choice between the masking[7] technique and the overlay technique.

Masking is a technique that interposes a layer of opaque material between the light source and the transparency. This material can be paper, cut to fit a transparency, or more permanent cardboard masks that can be used over again for different transparencies prepared in the same format. The teacher exposes or "unmasks" only that part of the material that is needed at any given time. Masking is useful for

language teachers because they can prepare transparencies that will include vocabulary items and situational elements that will be covered a few lessons beyond the point at which the transparencies will first be used. The later items can be masked out for early presentations, and the unmasked transparencies can be used when the student can handle the full range of data that is presented, and for review sessions.

For a detailed example of the technique of permanent masking, see the Report of the Working Committees of the Northeast Conference on the Teaching of Foreign Languages, 1969.

In the overlay technique, the teacher prepares a base sheet to be used as a foundation on which other acetate sheets will be laid. The overlay may be a sheet of clear acetate on which the teacher writes as he talks, or previously prepared material. Using a student composition or handwriting exercise that was either originally written on or later transferred to acetate as a base, the teacher may preserve the exercise in its uncorrected form while adding his corrections on an overlay either in class, or prior to class, using the materials described in the Techniques for Making Transparencies (p. 8). The overlay technique is used more widely in the teaching of geography or history than in language study because this technique permits the preparation of a base map on which additional data on geographical features, borders, and details of physical geography can be overlaid.

The presentation of all of the material on a transparency at one time is used for review of familiar data. A "dense" review presentation at the end of a lecture can be used to aid recall; it is a summary of the points covered in the class period. The transparency that summarizes one lecture may be used to begin a later lecture. The work of a longer period of time, a month or more, can be reviewed economically by rapidly presenting the same transparencies that were used for the original presentation. With each successive review, the material is shown for shorter and shorter periods of time. There is no other teaching technique that makes rapid review of essential items at intervals so convenient as using the overhead projector in this way. The use of the "all-at-once" presentation is also effective for timed testing in which all the students in a class see the same materials for the same length of time.

Evaluation

In our evaluation of a technique, or a piece of equipment, we must never forget the particular procedure with which it is to be used, the class with which it is to be used, and the teaching problem that we are trying to solve. Some of the questions that must be asked after we have made our choice, developed our material, and used it in the teaching situation are the following:

1. Did it work?
2. To what degree?
3. How can we improve it?
4. Would another technique have achieved the same purpose more effectively?

If we can answer these questions, we will have realized the deficiencies of the techniques that we are using; and we will also understand the utility, for our particular pedagogical purposes, of other, competitive techniques that might help us perform the same teaching task more effectively.

FOOTNOTES

1. This problem is treated in more detail and at greater length by J. Wrenn in "The Dialogue in the Classroom," Journal of the Chinese Language Teachers Association, 3 (Feb. 1968), 23-26.

2. An aid to memory. For example the word "HOMES" provides an acronym with which it is easy to remember the names of the Great Lakes, or the rhyme "i before e except after c" acts as a spelling aid.

3. These are methods of removing words systematically from a given dialogue so that the student may gradually re-create that dialogue for himself.

4. This is a typewriter with oversize characters.

5. Morton J. Schultz, The Teacher and Overhead Projection (Englewood Cliffs, N.J.: Prentice-Hall, 1965), p. 29.

6. Mary J. Ollman, ed. (New York: MLA, 1962), pp. 143-53.

7. The masking technique is also described as "disclosure," "exposure," and even "revelation."

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